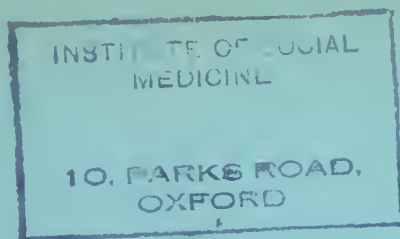


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BURGH OF GREENOCK



REPORT
ON THE
HEALTH OF THE BURGH
FOR THE YEARS 1940-44

BY
ALEXANDER JOHNSTONE, M.C., M.A., M.D., D.P.H.,
MEDICAL OFFICER OF HEALTH

INSTITUTE OF SOCIAL
MEDICINE

10, PARKS ROAD,
OXFORD

BURGH OF GREENOCK



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GREENOCK:
PRINTED BY R. A. BAIRD, LTD, MUNICIPAL BUILDINGS
1946

LIST OF STAFF

Medical Officer of Health

Alexander Johnstone, M.C., M.A., M.D., Ch.B., D.P.H.

Assistant Medical Officers of Health

Alastair Allan, M.B., Ch.B., D.P.H.

Isobel M. Brown, M.B., Ch.B., D.P.H., M.M.S.A., D.R.C.O.G.

Health Visitors

Joan M. Pollok.

Jean Wood.

Mary Brockie (Resigned 22/6/42).

Mary Watson.

Catherine Coyle (Took up duty
10/7/44).

Mrs. Jessie Gillespie.

Annie Lonie.

Jean Campbell (Resigned 30/4/44).

Flora MacIsaac (Took up duty
18/6/42).

Margaret Andrew (Took up duty
15/9/44).

Elizabeth McVicar (Greenock and District Nursing Association (Resigned
4/5/44).

Maud Steele (Greenock and District Nursing Association (Took up duty 5/5/44).

Mrs. Smith (Took up duty 10/6/42, Mrs. Jean Hammond (Took up duty
resigned 4/10/43). 20/10/42, resigned 8/5/43).

Dorothy Macfarlane (Took up duty Isabel Crumlish (Took up duty
7/6/43). 8/11/43).

In addition, two nurses of the Greenock and District Nursing Association
act as part-time Health Visitors under the Maternity and Child Welfare
Scheme.

Public Health Staff

John McCrone, *Epidemic Officer.*

Minnie Sinclair.

Elsie C. Greenham.

Margaret C. MacElwee.

Mary A. Cormack.

Elizabeth Helliwell (Took up duty
21/7/41).

Agnes Greenlees (Called up for
National Service 19/8/44).

Jenny Muir (Took up duty 8/11/42).

Margaret Walmsley (Took up duty
15/7/43).

Mary Kincaid (called up for Civil
Nursing Reserve 5/5/43).

Dorothy Preston (Joined Women's
Land Army 6/4/42).

Phyllis E. Chandler.

Matilda Baumgart (Called up to
A.T.S. 15/1/43).

Mrs. J. Sutherland (Took up duty
25/1/43).

Mr. H. Pool, Civil Defence Duties (Took up duty 5/3/42, died November, 1942).

Corporation Midwives

Jessie Gray (Took up duty 15/8/40,
resigned 25/1/44).

Mrs. Mary Rampling (Took up duty
15/8/40).

Mrs. M. S. Mackay (Took up duty
25/1/44).

Jean Fennie (Took up duty 15/8/40).

Annie S. McDermid (Took up duty
15/8/40).

Mrs. Isabella Swan (Took up duty
15/8/40).

Mrs. Helen Hamilton (Took up duty
15/8/40).

In addition to the above Greenock and District Nursing Association provide
two full-time midwives.

Rankin Memorial Hospitals

James Baxter, M.D., Ch.B., D.R.C.O.G., *Resident Medical Officer*.
Margaret McLennan, S.R.N., S.C.M., *Matron*.

Smithston Hospital and Asylum

William Leggett, M.D., *Medical Officer* (Resigned January, 1942).
Ann C. McMillan, S.R.N., C.M.B., S.R.M.N., *Superintendent of Nurses*.

Smithston Casualty Hospital

William Leggett, M.D., *Medical Officer* (Resigned January, 1942).
Ian Macdonald, M.B., Ch.B., *Medical Officer* (Took up duty July, 1940, resigned November, 1941).
A. R. Gemmell, M.B., Ch.B., *Medical Officer* (Took up duty 24/11/41, resigned June, 1942).
H. F. Kerr, M.B., Ch.B., *Medical Officer*, part-time (Took up duty 13/7/42).
Ann C. McMillan, S.R.N., C.M.B., S.R.M.N., *Matron*.

Venereal Diseases Special Treatment Centre

John Carson, *Orderly*.

Disinfecting Station

Patrick O'Kane, *Station Disinfecting Officer*.
Archibald Comrie, *District Disinfecting Officer* (Called up to H.M. Forces 15/5/42).
Duncan McLean, *District Disinfecting Officer* (Took up duty 26/1/42).

Reception House

Mrs. Kerr, *Caretaker*.

Wartime Nursery

Christina S. B. Wellcoat, S.R.N., *Matron* (Took up duty 26/4/43).

Attendants in Charge of Toddlers' Playgrounds

Mrs. M. A. Keith (Died 3/4/44). Mary L. C. Greenlees (Resigned 16/6/44).
Mrs. Donald (Took up duty 13/9/43).
Mrs. Boe (Took up duty 15/5/44).

Part-time Officers

John Miller, M.B., Ch.B., L.M., M.R.C.O.G., *Surgeon*
William A. Milne, M.B., Ch.B., *Accoucheurs*.
Randolph Douglas, L.D.S., D.D.S., L.R.C.P., *Dental Surgeon*.

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*To the Department of Health for Scotland
and the Local Authority for the Burgh of Greenock.*

LADIES AND GENTLEMEN,

During the years 1940 to 1944 inclusive no Annual Report was printed on account of war-time difficulties, and the Report now presented covers the main facts of the Health of the Burgh during that period.

The report shows that as far as can be at present ascertained the communal health did not deteriorate in spite of the abnormality of the times, although it is probably yet too early to express a final opinion.

None of the statistical figures are outstanding with the exception of the birth rates in 1940, 1941 and 1942, all of which were lower than any previously recorded.

The stress of war brought out all that was best in the department's staff, who gave magnificent service in very difficult circumstances. Although the main premises and all records and equipment were destroyed by enemy action in May, 1941, the department was providing useful service again within a week—a very notable achievement.

The war and the destructive air raids which affected the burgh clearly demonstrated that all Corporation Departments could and did co-operate and work as one unit when necessary, and I wish to thank all my colleagues for their never failing assistance.

I am,

Ladies and Gentlemen,

Your obedient Servant,

ALEXANDER JOHNSTONE,

Medical Officer of Health.

19th February, 1946.

Medical Officer's Report

For the Years 1940 to 1944.

VITAL STATISTICS

The following are the main statistical figures covering the war years 1940 to 1944 inclusive, along with the average of the previous years 1935 to 1939 for purposes of comparison. These figures give a good indication of the general effect of the war years on certain aspects of the community's life and health:—

	Average 1935- 1939	1940	1941	1942	1943	1944
Registrar General's estimate of population (civilian)	80,785	79,629	77,000	74,300	73,205	73,378
1. Marriage rate, uncorrected .. .	7.3	10.5	10.1	9.8	9.1	8.0
Natural increase of population	552	401	374	553	639	676
Number of births registered .. .	1,675	1,617	1,517	1,590	1,680	1,667
*2. Birth-rate .. .	20.71	19.7	18.8	20.1	21.0	20.5
Illegitimate birth rate per 100 births .. .	5.0	5.6	4.5	5.7	6.1	5.8
3. Infantile mortality rate .. .	90	82	90	104	80	81
Number of deaths registered .. .	1,122	1,216	1,143	1,037	1,041	991
4. Corrected death rate .. .	13.88	15.27	14.84	13.95	14.22	13.50
5. Death-rate from pulmonary tuberculosis .. .	0.82	0.92	1.17	1.15	0.75	0.94
Death-rate from non-pulmonary tuberculosis .. .	0.23	0.30	0.31	0.33	0.21	0.46
Total tuberculosis death-rate .. .	1.05	1.22	1.48	1.48	0.96	1.40
6. Principal epidemic diseases death rate .. .	0.64	0.75	0.36	0.23	0.42	0.30
7. Maternal death-rate (<i>i.e.</i> , death-rate of mothers in connection with child-birth) .. .	6.09	4.94	4.61	3.14	4.16	3.55
8. Stillborn rate .. .	46	33	47	47	45	40

* The population used in estimating birth rates includes an allowance for persons in the armed forces.

1. Marriage rate is number of marriages per thousand of population.
2. Number of births per thousand of population.
3. Number of deaths of children under one year per thousand live births.
4. Number of deaths per thousand of population.
5. Number of deaths from tuberculosis per thousand of population.
6. Number of deaths from the chief infectious diseases per thousand of population.
7. Number of deaths of mothers per thousand births.
8. Number of dead born babies per thousand births.

INFECTIOUS DISEASES

The figures given below show the actual numbers of cases of infectious disease which were notified or came to the knowledge of the department. They seem to indicate that the normal incidence of these conditions was not materially affected by the war :—

	Average 1935— 1939	1940	1941	1942	1943	1944
Measles	826	2,309	447	909	397	1,988
Whooping Cough	607	882	311	87	573	436
Scarlet fever	231	114	112	187	135	71
Diphtheria	90	129	153	151	99	113
Chickenpox	626	525	681	240	600	651
Mumps	295	258	371	265	66	1,304
Enteric fever	7	24	13	4	4	4
Dysentery	5	2	2	11	2	1
Acute primary pneumonia	50	45	51	44	49	45
Acute influenzal pneumonia	6	4	8	—	4	2
Pneumonia, unclassified	51	82	80	33	66	35
Malaria	0.40	2	4	11	1	2
Cerebro-spinal meningitis	1	9	21	6	2	1
Smallpox	—	—	—	—	—	—
Puerperal fever	2	3	5	2	2	9
Puerperal pyrexia	13	12	4	11	8	4
Ophthalmia neonatorum	21	16	6	17	5	22
Acute poliomyelitis (Infantile Paralysis)	2	3	1	—	—	—

VACCINATION.

This procedure continued to be neglected as is shown by the figures given below. The situation would indeed be serious if smallpox were introduced into the burgh and of this possibility there was and still is a very definite danger :—

Number vaccinated	314	331	400	574	651	635
Number of conscientious objectors	1,266	1,119	877	739	847	883
Children insusceptible	18	25	7	20	13	15

IMMUNISATION AGAINST DIPHTHERIA.

Part of the records of this service was destroyed, and the figures given relate only to the period after 6th June, 1941.

A very considerable amount of work has been done, but there is still a long way to go before comparative safety from diphtheria can be reached in the community.

	Average 1935- 1939	1940	1941	1942	1943	1944
Immunisations completed						
Under school age	—	—	*743	355	299	586
School age	—	—	*3,393	3,534	871	419

*From 6/6/41—Other records destroyed in May, 1941.

TUBERCULOSIS

The incidence of tuberculosis has steadily increased during the war years, and there has been a constant difficulty in obtaining sanatorium and hospital accommodation with the result that waiting lists are becoming long and heavy, a new experience for burgh patients. This is due chiefly to the lack of nursing staff, as in some places there are beds vacant for want of staff to serve them.

The X-ray equipment of the department was destroyed in May 1941, and makeshift arrangements have been made since then. These have worked fairly satisfactorily but should be replaced as soon as practicable. This, however, hinges on the provision of new premises for the Public Health Department, and a certain amount of delay would appear to be inevitable.

The following figures indicate the position :—

	Average 1935- 1939	1940	1941	1942	1943	1944
Number of notifications, pulmonary	126	140	152	159	195	202
Number of notifications, non-pulmonary	44	41	45	60	48	69
Number of cases treated in sanatorium or hospital	213	237	275	262	276	283

MATERNITY AND CHILD WELFARE

The figures given below are not complete owing to the loss of records and the inability to replace them from other sources.

The War-time Nursery was opened in April, 1943, for forty children, and was later extended in September, 1944, to deal with twenty-eight additional children. This organisation was brought under the Maternity and Child Welfare arrangements and was taken full advantage of by mothers doing war work.

Below is given a general outline of the volume of work carried out.

	Average 1935- 1939	1940	1941	1942	1943	1944
Visitation of Children.						
Number of children visited under 1 year of age	2,430	—	*1,453	2,298	2,270	2,286
Number of children visited, 1 to 5 years	6,707	—	2,683	4,719	4,746	4,629
Attendance at Clinics.						
Number of children under 1 attending clinics	1,264	—	713	801	887	984
Number of children 1 to 5 years attending clinics	953	—	391	474	453	583
Toddler's Playgrounds.						
Average Session attendance— Sinclair Street	27 (1937-1939 only)	31	32	29	30	31
Hillend	opened 1940	22	27	18	30	29
Wartime Nursery.						
Average daily attendance	—	—	—	—	33 (June to December)	35
Midwifery Service.						
Number of confinements attended by Corporation midwives	Scheme started 1940	280	493	641	601	568

* From May to December, 1941.

RANKIN MEMORIAL HOSPITALS

Maternity Section

	1940		1941		1942		1943		1944	
	M.	C.	M.	C.	M.	C.	M.	C.	M.	C.
Number of admissions....	552	—	648	9	693	4	704	4	807	1
Number of confinements	462	—	564	—	614	—	638	—	737	—
Number of live births	—	441	—	532	—	568	—	610	—	705
Number of stillbirths	—	27	—	41	—	50	—	39	—	38
Number of deaths	7	15	5	15	1	38	4	20	3	24
Number of mothers attending antenatal clinic	456	—	536	—	584	—	642	—	653	—
Number of mothers attending post - natal clinic	229	—	151	—	191	—	200	—	197	—

Children's Section

	1940	1941	1942	1943	1944
Number of children admitted. . .	149	171	142	110	106
Number of children discharged	120	134	120	79	69
Number of children died ...	31	20	33	20	29

MATERNITY SERVICES (SCOTLAND) ACT, 1937

The Corporation's Scheme under the Maternity Services Act came into operation on 15th August, 1940. Six whole-time Corporation midwives appointed and the services of two general trained nurse midwives were arranged for with the Greenock and District Nursing Association.

The scheme has operated smoothly and efficiently since its inception.

The following are the relevant figures:—

	1940 (from 15th August)	1941	1942	1943	1944
Number of confinements	280	493*	641	601	568
Number of ante-natal visits	1,544	3,105*	4,817	3,698	3,839
Number of post-natal visits	3,062	8,107*	9,999	9,878	9,087
Number of special post-natal visits	138	486*	604	504	456

* Except April and May, for which months record was destroyed.

MIDWIVES (SCOTLAND) ACT, 1915

The number of confinements attended by midwives in private practice has markedly declined during the war years. This has been due to the opening of the Rankin Hospitals in 1938 and the inception of the Corporation's Maternity Services Scheme in 1940. The figures given below show the general trend of this change, although they are not available for 1940 and incomplete in 1941.

	Average 1935-1939	1940	1941	1942	1943	1944
Number of confinements attended by midwives in private practice	1,175	not known	*110	251	325	255
Number of above cases in which doctor was called in emergency	428	not known	*31	86	95	92

* From May to December, 1941.

VENEREAL- DISEASE

The years under review brought a marked increase in the number of cases attending for diagnosis and treatment of venereal disease. This was much more marked in men than in women owing chiefly to the greatly increased number of ships at the anchorage and service cases. Later on the service cases decreased as special arrangements were made by the services themselves, particularly the Navy.

The decrease in the number of attendances shown in the male figures as compared with the average 1935 to 1939 is due chiefly to the change in the method of treatment and to the fact that many cases were receiving only temporary treatment in Greenock while they passed through.

The following are the figures :—

	Average 1935-1939	1940	1941	1942	1943	1944
MALES.						
New cases	142	433	859	1,000	518	349
Number of attendances at doctors' clinics	2,633	1,924	3,224	3,810	2,843	2,121
Number of attendances at centres	6,995	5,126	8,065	6,658	3,599	3,614
Total attendances	9,629	7,050	11,289	10,468	6,442	5,735
FEMALES.						
New cases	80	69	74*	91	137	91
Number of attendances at doctors' clinics	1,743	1,120	989*	1,327	1,669	1,805
Number of attendances at centres	1,235	433	426*	322	366	448
Total attendances	2,979	1,553	1,415*	1,649	2,035	2,253

*10 months (April and May missing).

HOSPITAL ACCOMMODATION

Gateside hospital was called upon to deal with a large number of cases of infectious disease from the ships at the anchorage and from service units stationed in the neighbourhood. This created considerable difficulty, but the large majority of the cases requiring treatment were admitted.

The following are the figures of cases admitted to the hospital from the Burgh of Greenock :—

Average 1935-1939	1940	1941	1942	1943	1944
438	501	588	530	423	370

572

398

REGISTRATION OF NURSING HOMES

There was no change during the war years in the institutions exempted from registration under the Nursing Homes Registration (Scotland) Act, 1938, or registered under that Act.

SMITHSTON INSTITUTION

Towards the end of 1939 arrangements were made to convert the middle flat of the Poorhouse block in Smithston Institution into a hospital of approximately 96 beds for the treatment of the sick poor of the burgh in order to allow the existing hospital to be used for air raid casualties and other contingent emergencies. The transfer of patients was actually effected in December, 1939.

On 30th May, 1940, Smithston Hospital block was opened as Smithston Casualty Hospital, and patients began to be admitted on 12th July, 1940. On 15th December, 1941, Smithston Institution, with the exception of the Casualty Hospital and the Children's Pavilion, was evacuated by the local authority in order to allow the buildings to be taken over by the Canadian Naval Authorities. Male hospital patients were sent to Craw Road Institution, Paisley, and female hospital patients were transferred to part of the Casualty Hospital. Male and female lunatics were sent to Cunningham Home, Irvine, Gartloch Mental Hospital, Glasgow, and Larbert Mental Hospital. Children were taken to Cunningham Home, Irvine, but they were brought back to the Pavilion at Smithston early in January, 1942. Poorhouse patients, male and female, went to Craw Road Institution, Paisley.

On 12th January, 1942, the Emergency Hospital was evacuated until a separate kitchen could be built, as it was not found practicable to continue to do the cooking in the main kitchen of the institution. All the patients were transferred elsewhere, but the Matron and some domestic staff remained in the hospital and were fed along with the children in the Pavilion from the facilities available in one of the ward-pantries of the hospital. The hospital itself was opened again on 15th April, 1942.

On 22nd January, 1944, the Emergency Hospital itself was evacuated as the accommodation was required for use by the Canadian Naval Authorities. The last patient had been discharged at the end of October, 1943.

At the end of 1944, therefore, the only portion of the institution remaining in the hands of the Corporation was the Children's Pavilion, which was administered by the Public Assistance Department.

The following patients were admitted to the Casualty Hospital:—

	1940		1941		1942		1943	
	M.	F.	M.	F.	M.	F.	M.	F.
Public Assistance Patients			1	38	29	10	92	33
*E.M.S. Category Patients	159	14	263	86	146	5	114	—
Total	159	14	264	124	175	15	176	33

* Emergency Medical Service category patients consisted chiefly of air-raid casualties and members of Merchant Navy, including survivors and cases requiring treatment for scabies.

The admissions of Public Assistance patients to the normal hospital wards at Smithston were as follows:—

	M.	1940 F.	Total	M.	1941 F.	Total
In hospital at 1st January	21	22	43	20	17	37
Admitted during year	177	93	270	138	76	214
Died during year	56	25	81	64	13	77
Discharged during year	113	66	179	75	38	113
Transferred during year	9	7	16	6	4	10
Remaining at 31st December	20	17	37	13	38	51

As already shown, one male and 38 female patients were transferred to Casualty Hospital in December, 1941, and the remaining male patients were admitted to Craw Road Hospital, Paisley.

The following is a record of the admission, etc., of patients to Smithston Asylum:—

	M.	1940 F.	Total	M.	1941 F.	Total
In asylum at 1st January ..	147	114	261	149	109	258
Admitted during year	23	19	42	15	15	30
Discharged during year	8	10	18	8	9	17
Transferred during year	2	2	4	1	—	1
Died during year	11	12	23	7	5	12
Boarded out during year	—	—	—	2	—	2
Remaining at 31st December	149	109	258	146	110	256

In December, 1941, the patients were transferred to the following institutions:—

	M.	F.	Total
Cunninghame Home, Irvine	10	15	25
Gartloch Asylum, Glasgow	40	80	120
Larbert Mental Institution ..	96	15	111
Total ..	146	110	256

In addition to the above, patients were admitted to Smithston Pavilion following on the air raids in May, 1941, for the treatment of scabies. The numbers are as follows:—

Girls ... 35 Boys ... 24

The last patients were discharged on 23rd August, 1941.

BACTERIOLOGICAL EXAMINATIONS

Early in the war the Department of Health created an emergency laboratory in Paisley, and instructions were issued to send all specimens there for examination. Protest was made in the case of throat swabs on account of the lapse of time before the results were received, and finally it was agreed that swabs and sputa should continue to be examined at Gateside Hospital. This procedure is still being carried out. The following are the numbers of specimens examined :—

Average 1935-1939	1940	1941	1942	1943	1944
923	661	*452	796	469	717

The additional specimens examined at the Emergency Laboratory and elsewhere are recorded below :—

Average 1937-1939	1940	1941	1942	1943	1944
171	No record	*111	282	173	283

* From May to December.

These figures do not include samples taken for the control of the water supply and those in connection with the venereal disease scheme.

PORT SANITARY ADMINISTRATION

On 18th March, 1941, emergency arrangements were made by the Department of Health for Scotland under which Glasgow Port Local Authority took over the sanitary supervision of all vessels at the Clyde Anchorage, but this did not include vessels in Greenock Harbours, which continued to be dealt with by the Local Authority.

This change was made necessary by the great increase in the area of anchorage which came to include all waters inside the Cloch-Dunoon Boom and the huge numbers of vessels entering the Clyde. This was still the position at the end of 1944.

Previous to the change mentioned the Public Health Department dealt with many vessels in the anchorage opposite Greenock, but no record of this remains.

The number of vessels dealt with in the harbours were as follows :—

	Average 1935-1939	1940	1941	1942	1943	1944
Number of vessels	112	Not known	*35	151	215	184
Number of deratization certificates issued	10	3	12	16	14	30
Number of deratization exemption certificates issued	42	70	43	37	38	34

* From May to December, 1941.

DISINFECTION

No material change was made in the arrangements during the war but additional heating pipes were installed in the drying rooms to help with the disinfestation of clothing in the event of typhus fever making its appearance. The following articles were dealt with :—

	Average 1935-1939	1940	1941	1942	1943	1944
Number of articles	14,188	12,175	26,781	22,653	17,384	12,298

RECEPTION HOUSE

The Reception House was not in use for housing contacts of infectious disease during the war years. In the early days it became the Civil Defence Depot for the east end of the burgh and served this purpose satisfactorily until the more commodious premises at Cappielow were opened. It was then used for the storage of equipment, and in June, 1942, part of it was converted into a temporary clinic for the treatment of scabies and other verminous conditions for which purpose it gave and still gives very useful service.

The number of patients treated in this special clinic is as follows :—

	1942	1943	1944
Number of patients treated	809	962	674

MILK AND DAIRIES

The Milk supply was supervised on the same lines as in the pre-war period although it was at times exceedingly difficult on account of the shortage of staff and the changes necessitated by rationalisation of distribution, new methods of heat treatment, etc. No infectious disease carried by milk was encountered during the period.

MEAT INSPECTION

The work of the Slaughterhouse was greatly increased, and Greenock became the slaughtering centre for a much larger area than formerly.

The following are some of the figures of the work carried out :—

	Average 1935-1939	1940	1941	1942	1943	1944
Number of animals slaughtered	24,437	28,991	32,821	39,409	42,064	45,650
Number found affected with tuberculosis	1,280	1,329	999	1,059	1,146	1,385
Percentage affected by tuberculosis	5.24	4.58	3.04	2.68	2.7	3.03
Whole carcasses seized for tuberculosis	46	57	36	33	42	48
Parts of carcasses seized for tuberculosis	143	143	99	80	122	170
Whole carcasses seized for diseases other than tuberculosis ...	55	77	68	96	132	143
Parts of carcasses seized for diseases other than tuberculosis	39	96	38	50	61	86

HOUSING

House building in the burgh was much reduced during the period, but the following numbers of houses were certified for occupancy by the Master of Works :—

Average 1935-1939	1940	1941	1942	1943	1944
408	97	128	72	102	113

In spite of the overcrowded condition of the burgh before the outbreak of hostilities many more persons were absorbed during the war years, especially dockers, naval personnel and their families, and other essential war workers, and it is indeed amazing how they were able to obtain accommodation without upsetting the health balance of the community.

FACTORIES ACT

The usual supervision of factories and work places was carried out as far as that was possible, and advice and help were given in many instances where they were needed.

WATER SUPPLY

The water supply proved adequate to all calls made upon it. Chlorination was resorted to as a precautionary measure. Following on the air raids of May, 1941, the chlorine content of the supply was greatly increased and intensive control of its condition was exercised for some time. Thereafter samples were taken every fortnight, and that arrangement has continued since then.

The results of examination indicate that provided chlorination is continued at the present standard the water is entirely satisfactory for drinking purposes. New works, however, have been carried out and others are contemplated to improve still further the filtration of the raw water.

A large amount of water was supplied to shipping at the anchorage, and after some initial difficulty and considerable investigation the factors leading to pollution of the water between the mains and the ships' tanks were eliminated. Thereafter the burgh water was carried all over the world and proved entirely satisfactory.

SEWERAGE

The sewerage system proved in the main able to accommodate all waste products.

Air raid damage caused temporary difficulty and appeared to threaten danger, but this was satisfactorily avoided and no damage to health resulted.

EFFECTS OF WAR

A state of war brought with it many factors which might have been expected to prejudice the health of the community, but with the exception of a very definite increase in tuberculosis there was no evidence that such factors did actually do any lasting damage to health as far as the records of infectious disease can show. Overwork, anxiety and strain, war weariness, black-out, overcrowding, rationing with its attendant misery of the queue, travelling difficulties and discomforts and the effects of air raid damage, were all present, but the community emerged if not unscathed at least unbroken in health. Perhaps the effects may yet show, and it would be as well to wait until the winter is over before making the final assessment.

Tuberculosis has been shown to have definitely increased, as happened in the last war, and it does not appear that at the end of 1944 we had passed the peak and that the decrease had already begun. This problem has been made worse by the shortage of available beds.

Venereal Disease increased very markedly in the earlier war years, particularly as far as male infections were concerned, but this was in very large measure due to cases from the greatly increased shipping at the anchorage and service cases which attended the local clinics before local service arrangements could be made for treatment.

No major epidemic of infectious disease was encountered during the whole period, although there were times when indefinite but acute respiratory and digestive illnesses were prevalent. Such action as could be taken did not reveal any specific cause. It may be said that in this respect the community, and for that matter, the whole country, was lucky.

Feeding of the population was undoubtedly one of the successes of the war-time arrangements, and the children particularly showed that their health was definitely improved in spite of other adverse factors. The dietary is not ample, it is monotonous and tedious to collect, but it is based on sound principles and has certainly been health maintaining.

The air raids in May, 1941, brought disaster to the burgh. The following casualties were reported :—

	Men	Women	Children	Unclaimed	Total
Killed or died later, missing believed killed	115	112	67	3	297
Injured and detained in hospital	158	110	22	—	290
Injured but not detained in hospital....	178	129	29	—	336

The following damage was caused to dwelling houses :—

Number regarded as total losses ..	635
Number destroyed or badly damaged, but to be rebuilt, being of modern plan ..	341
Number very seriously damaged, but repaired by special permission of the Department of Health (Corporation houses) ...	74
Number damaged but repairable ...	12,339

Much damage was also done to public services, and, with the breaching of sewers and water mains, an ugly situation might have developed, but this was luckily averted and no untoward happening took place, chiefly on account of the happy helpful co-operation between the different Corporation departments concerned.

The Public Health Department office, incorporating the main clinics, was completely destroyed by fire, with all its records and equipment, but the department was operating a modified service again within a week, thanks to the enthusiastic efforts of the whole staff and their willingness to put up with uncomfortable makeshift arrangements for a very considerable period. The Civil Defence training centre at 3 Shaw Place was converted into offices, and these remain the central premises of the department. Damage was also sustained at Hillend Clinic and the Reception House, but this was not of a severe degree and did not prevent the work being carried on.

The Civil Defence Casualty Service, along with the other services, fulfilled its function magnificently. It took care of the injured, courage to the fearful, and helped to maintain general morale with selfless devotion to duty, under

very difficult circumstances. The hospitals involved also carried out their work with splendid efficiency, and the whole organisation, both field and hospital was ready again to function on the following days if more trouble had come, but this most happily did not materialise. At the end of 1944 the organisation was fully maintained, and the following premises were manned day and night :—Finnart School First Aid Post ; Wellpark First Aid Post ; and Craigieknowes First Aid Post, while the following were ready for action but were not constantly manned :—Two Mobile First Aid Posts stationed at Madeira Civil Defence Depot and Pennyfern Factory Garage respectively ; Fort Matilda Rugby Pavilion Cleansing Station ; Cartsburn-Augustine Church Hall Cleansing Station and St. Mungo's School Cleansing Station. In addition ambulance personnel did continuous shift duty in the evenings at Madeira Civil Defence Depot, Togo House Depot, and Cappielow Depot. Much equipment was stored at various dispersal points throughout the burgh.

At the end of 1944 ten whole-time personnel and 285 part-time volunteers carried out all the necessary duties.

The Burgh was well supplied with air raid shelters of the surface type, and there were many strutted closes and basements for use in the event of raids. There was, however, little or no "shelter life" as it was known in the south. One railway tunnel was used as a shelter by a number of dwellers in the neighbourhood, many of whom slept there every night for a period, but no ill effects were observed although the conditions were anything but satisfactory.

The communal domestic shelters were a constant source of worry, particularly after the imminent danger of raids was over, and many adverse reports on their condition were submitted to the Local Authority. The sooner they are demolished the better for the community.

Early in the war Greenock was classed as a neutral area from an evacuation point of view, but later on official billets were accepted, although these never amounted to many. There were a few unaccompanied children and a rather larger number of mothers and children from England.

After the raids of May, 1941, many homeless persons left the burgh and obtained accommodation in other areas more or less adjacent to Greenock, and at the end of 1944 some had not returned. Considerable numbers of homeless persons were first accommodated in rest centres and later billeted throughout the town : after a considerable period most of these were housed in their own houses after repair, in other repaired houses, or in large houses requisitioned and altered to accommodate a number of families. Many of these families still occupy the adapted houses.

This procedure caused many and difficult problems, but most of them were ultimately solved in a more or less satisfactory manner. Accurate figures covering the various changes are not now available.

The destruction and damage of so many houses caused much misery and discomfort, but the measures taken, although they were in the main only of an improvised character, did much to alleviate distress, but they could not in most instances make up for the loss of home comforts. It is indeed surprising how little obvious effect on general health this sudden upheaval appears to have created.

APPENDIX

**TABLE I.—POPULATION AND PRINCIPAL RATES
PER 1,000—REGISTRAR GENERAL—1881-1944**

Year	Population	Death-rate	Birth-rate	Infantile Mortality Rate	Tuberculosis Death-rate	
					Pulmonary	Non- Pulmonary
1881-1885	71,578	22.19	38.01	139	2.35	0.96
1885-1890	72,073	18.92	32.23	127	2.03	0.69
1891	63,432	22.54	32.55	163	1.82	0.56
1892	63,027	19.74	35.83	116	2.01	0.65
1893	62,713	20.90	32.96	134	1.59	0.65
1894	62,400	19.23	32.20	133	2.09	0.49
1895	62,090	23.06	33.84	152	1.62	0.82
1891-1895	62,732	21.09	33.47	139	1.82	0.63
1896	61,781	17.84	33.08	120	1.76	0.55
1897	61,475	22.17	33.05	159	2.06	0.68
1898	61,170	21.38	35.20	136	2.07	0.83
1899	67,269	19.64	31.01	142	1.70	0.83
1900	67,776	19.18	32.50	130	1.59	0.84
1896-1900	63,894	20.04	32.96	137	1.83	0.74
1901	68,264	19.45	29.84	132	1.46	0.50
1902	68,756	19.85	31.74	122	1.81	0.94
1903	69,252	18.93	29.56	144	1.68	0.80
1904	69,749	17.65	30.09	123	1.20	0.93
1905	70,253	18.78	30.49	116	1.31	1.05
1901-1905	69,254	18.93	30.34	127	1.49	0.92
1906	70,758	17.89	32.21	127	1.34	1.25
1907	71,269	17.79	30.25	104	1.54	1.08
1908	71,783	17.00	30.31	118	1.21	1.12
1909	73,214	15.01	26.73	95	1.09	1.09
1910	74,667	18.87	28.85	129	1.16	0.96
1906-1910	72,338	17.31	29.67	114	1.26	1.10
1911	75,028	18.44	30.73	113	1.50	0.95
1912	76,337	18.70	31.30	119	1.44	1.02
1913	77,156	18.22	31.03	116	1.47	0.86
1914	77,642	18.04	32.84	108	1.00	0.91
1915	77,695	20.14	29.49	145	1.15	0.91
1911-1915	76,771	18.70	31.07	120	1.39	0.93

Table I.—Population and Principal Rates per 1,000—*Continued.*

Year	Population	Death-rate	Birth-rate	Infantile Mortality Rate	Tuberculosis Death-rate	
					Pulmonary	Non- Pulmonary
1916	78,642	17.10	29.20	109	1.42	0.75
1917	79,299	15.10	26.88	92	1.28	0.83
1918	79,574	17.88	26.52	110	1.10	0.82
1919	79,613	17.25	28.73	99	0.94	0.59
1920	80,436	16.51	33.34	104	1.06	0.69
1916-1920	79,512	16.76	28.93	102	1.16	0.73
1921	81,120	14.59	30.15	93	1.01	0.54
1922	81,370	19.17	27.68	149	1.03	0.68
1923	81,522	12.94	27.04	77	0.99	0.54
1924	82,096	15.22	24.16	113	1.00	0.44
1925	81,200	14.32	24.54	107	0.85	0.52
1921-1925	81,461	15.24	26.71	107	0.97	0.54
1926	81,558	13.74	23.87	90	0.98	0.34
1927	80,889	13.26	22.17	89	0.87	0.44
1928	79,204	15.74	24.05	120	0.80	0.34
1929	81,844	15.57	22.22	111	1.04	0.26
1930	82,131	13.69	22.98	96	0.88	0.30
1926-1930	81,125	14.40	23.05	101	0.91	0.33
1931	79,012	13.50	23.40	78	0.90	0.30
1932	79,387	14.63	21.47	121	0.66	0.36
1933	79,486	15.03	20.60	108	0.88	0.18
1934	79,605	12.90	20.86	89	0.79	0.21
1935	79,980	13.85	21.16	92	0.76	0.09
1931-1935	79,494	13.98	21.49	97	0.79	0.22
1936	80,524	13.72	20.29	101	0.63	0.28
1937	80,957	15.60	21.60	97	1.01	0.31
1938	81,297	12.81	20.24	75	0.79	0.30
1939	81,366	13.43	20.30	88	0.93	0.17
1940	79,629	15.27	19.7	82	0.92	0.30
1936-1940	80,754	14.16	20.42	88	0.85	0.27
1941	77,000	14.84	18.8	90	1.17	0.31
1942	74,300	13.95	20.1	104	1.15	0.33
1943	73,205	14.22	21.0	80	0.75	0.21
1944	73,378	13.50	20.5	81	0.94	0.46

APPENDIX

TABLE II.—INFECTIOUS DISEASES RATES 1900-1944

YEAR	SCARLET FEVER			DIPHTHERIA			MEASLES			WHOOPING COUGH		
	Incidence rate per 1000.	Death-rate per 1000.	Case mortality rate per cent.	Incidence rate per 1000.	Death-rate per 1000.	Case mortality rate per cent.	Incidence rate per 1000.	Death-rate per 1000.	Case mortality rate per cent.	Incidence rate per 1000.	Death-rate per 1000.	Case mortality rate per cent.
1900	2.55	0.17	6.93	1.19	0.4	34.56	5.48	0.13	2.41	9.42	1.09	11.56
1901	7.92	0.42	5.36	8.93	0.17	19.67	0.82	0.35	3.24	1.87	0.36	19.53
1902	7.79	0.85	11.00	1.06	0.43	41.09	26.44	0.49	1.87	1.96	0.13	10.34
1903	2.33	0.11	4.93	0.54	0.12	23.68	0.66	0.02	4.34	6.55	1.02	15.63
1904	1.07	0.07	6.66	1.17	0.27	23.17	30.28	0.83	2.74	3.59	0.32	9.16
1905	2.81	0.32	11.61	0.88	0.21	24.19	31.31	0.82	2.63	5.50	0.76	13.95
1906	1.92	0.08	4.41	0.70	0.12	18.00	4.04	0.12	3.14	2.54	0.28	11.11
1907	2.16	0.05	2.59	0.75	0.14	18.51	19.68	0.46	2.35	3.70	0.68	18.56
1908	0.97	0.01	1.42	0.72	0.16	23.07	14.76	0.58	3.96	3.63	0.47	13.02
1909	2.89	0.04	1.41	1.05	0.13	12.98	1.73	0.02	1.57	4.73	0.65	13.83
1910	5.02	0.14	2.93	1.27	0.18	14.73	38.45	1.21	3.16	3.87	0.45	11.76
1911	5.18	0.18	3.59	1.94	0.09	9.85	4.45	0.17	3.89	5.85	0.42	7.28
1912	10.02	0.49	4.96	1.21	0.13	10.75	19.93	0.66	3.35	4.12	0.36	8.88
1913	5.59	0.24	4.39	1.03	0.18	17.50	19.99	0.41	2.07	9.40	0.63	6.74
1914	2.65	0.05	1.94	1.76	0.12	7.29	11.86	0.33	2.82	4.22	0.33	7.92
1915	1.90	0.11	6.08	1.72	0.16	9.70	14.32	0.65	4.58	9.38	0.73	7.81
1916	3.73	0.76	2.04	1.61	0.19	11.81	17.15	0.95	5.55	0.72	0.05	7.01
1917	2.74	0.06	2.29	1.23	0.12	10.20	10.12	0.20	1.99	11.43	0.80	7.05
1918	1.36	0.01	0.91	0.70	0.03	5.35	10.10	1.25	12.33	4.53	0.33	7.47
1919	3.95	0.06	1.58	1.10	0.03	3.40	15.26	0.32	2.13	2.36	0.16	6.91

Table II.—Infectious Diseases Rates 1900-1944—Continued.

YEAR	SCARLET FEVER			DIPHTHERIA			MEASLES			WHOPPING COUGH		
	Incidence rate per 1000.	Death-rate per 1000.	Case mortality rate per cent.	Incidence rate per 1000.	Death-rate per 1000.	Case mortality rate per cent.	Incidence rate per 1000.	Death-rate per 1000.	Case mortality rate per cent.	Incidence rate per 1000.	Death-rate per 1000.	Case mortality rate per cent.
1920	1.47	0.04	3.36	1.28	0.07	5.82	5.71	0.24	4.34	6.88	0.27	3.97
1921	1.31	0.01	0.93	1.76	0.07	4.19	3.69	0.00	0.00	0.62	0.00	0.00
1922	1.36	0.01	0.90	1.04	0.08	8.23	36.32	2.17	5.98	18.31	0.98	5.36
1923	4.90	0.07	1.50	1.37	0.07	5.35	6.31	0.14	2.33	0.41	0.02	5.88
1924	2.64	0.06	2.30	1.79	0.06	3.40	23.02	0.59	2.59	15.87	0.54	3.45
1925	1.21	0.01	1.01	2.11	0.09	4.65	1.07	0.00	0.00	6.83	0.39	5.76
1926	3.85	0.00	0.00	3.33	0.13	4.04	24.57	0.46	1.89	0.71	0.01	1.72
1927	3.48	0.06	1.77	3.20	0.03	1.15	7.76	0.02	0.31	5.24	0.09	1.88
1928	0.84	0.01	1.49	2.91	0.17	6.06	29.49	1.02	3.46	8.53	0.51	6.06
1929	2.02	0.00	0.00	2.41	0.07	3.03	0.52	0.02	4.64	6.25	0.46	7.14
1930	3.61	0.08	2.35	1.57	0.06	3.87	25.09	0.34	1.35	6.24	0.18	2.92
1931	3.69	0.07	2.05	1.06	0.03	3.57	1.48	0.00	0.00	3.97	0.11	2.86
1932	10.69	0.12	1.17	1.44	0.05	3.47	38.04	0.90	2.38	3.30	0.06	1.90
1933	14.10	0.11	0.80	2.05	0.10	4.90	3.95	0.00	0.00	11.14	0.55	4.96
1934	5.40	0.05	0.93	2.31	0.18	8.15	21.30	0.15	0.70	1.64	0.06	3.81
1935	1.17	0.02	2.12	1.52	0.07	4.91	13.41	0.03	0.27	13.37	0.32	2.12
1936	0.96	0.01	1.28	1.34	0.02	1.85	11.25	0.04	0.44	1.39	0.01	0.89
1937	2.70	0.01	0.54	0.59	0.02	4.16	24.95	0.13	0.54	13.03	0.38	2.93
1938	6.44	0.07	1.14	1.04	0.03	3.52	1.21	0.02	2.02	1.89	0.02	1.29
1939	2.94	0.82	0.83	1.11	0.03	3.29	0.55	0.00	0.00	7.95	0.11	1.39
1940	1.43	0.00	0.00	1.62	0.05	3.10	28.99	0.07	0.25	11.07	0.18	1.70
1941	1.45	0.01	1.98	1.98	0.06	3.26	5.80	0.02	0.44	4.03	0.03	0.96
1942	2.51	0.01	0.53	2.03	0.02	1.98	12.23	0.00	0.00	1.17	0.53	4.59
1943	1.84	0.00	0.00	1.35	0.03	2.02	5.42	0.01	0.25	7.82	0.09	1.22
1944	0.96	0.00	0.00	1.53	0.00	0.00	27.09	0.06	0.25	5.95	0.10	1.83